

**LISTING OF CLAIMS:**

1. - 132. (Canceled)

133. (Currently amended) A method for identifying a chromosomal deletion,  
comprising the steps of :

~~DNA probe set, said probe set comprising a first probe set and a second probe set,~~  
hybridizing a first probe set to a chromosome, said first probe set being sufficient in  
length and substantially complementary to a deletion region of a chromosome but  
less than an entire chromosome such that said first probe set will hybridize to the  
deletion region if it is present, and

hybridizing a second probe set to a chromosome, said second probe set being  
sufficient in length and substantially complementary to nucleotides in the regions of  
the chromosome flanking the deletion region but less than an entire chromosome  
such that said second probe set will hybridize to the flanking regions regardless of  
whether the deletion region is present;

wherein said first and second probe sets are detectably labeled, and wherein the  
label for the first probe set is distinguishable from the label for the second probe set.

134 - 143. (Canceled)

144. (New) The method of claim 133, further comprising adding blocking nucleic  
acid that comprises fragments which are substantially complementary to repetitive  
segments in the targeted chromosomal DNA.